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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,454	10/12/2004	Xiao-Qi Zhou	H0003298.67498 US - 4018	2358
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BUCHALTER NEMER 18400 VON KARMAN AVE. SUITE 800 IRVINE, CA 92612			EXAMINER PENG, KUO LIANG	
			ART UNIT	PAPER NUMBER
			1796	
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			01/23/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/511,454

Applicant(s)

ZHOU ET AL.

Examiner

Kuo-Liang Peng

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/25/08 Amendment.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

1. The Applicants' amendment filed September 25, 2008 is acknowledged.
Claims 1 and 35 are amended. Now, Claims 1-64 are pending.
2. In response to Applicants' remarks (page 11, last paragraph), Applicants are advised that if an interview is believed to be able to facilitate the prosecution of the instant application, they should contact Examiner as early as possible because the amended applications might not be processed by Examiner until very close to the due date, and then, there is not enough time for an interview.
3. Claim rejection(s) over Matayabas (US 6 469 379) under 35 USC 102/103 in the previous Office Action (Paper No. 20080426) is/are removed.
4. The text of those sections of Title 35, U.S. code not included in this action can be found in prior Office Action(s).

Claim Rejections - 35 USC §102 and 103

5. Claims 1-14, 16, 18-20, 22-23, 25-48, 50, 52-54, 56-57 and 59-64 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mine (US 6 040 362).

Mine discloses a thermal interface composition comprising components A) to C). Component C) can be a platinum catalyst. (col. 2, line 5 to col. 5, line 9) Since components A) (containing Si-alkenyl groups) and B) (containing Si-H groups) have different substituents, Examiner has a reasonable basis to believe that each has a different solubility parameter. An inhibitor can be used. (col. 6, lines 23-41) Fillers such as silica, copper, etc. can be used. (col. 6, line 42 to col. 7, line 33) The filler can be pre-treated with organosilazanes such as **hexamethyldisilazane**. (col. 6, lines 42-63 and Practice Example 3). The composition can be used for preparing IC, etc. (col. 8, lines 21-41) Mine does not explicitly mention the morphology (i.e., phase separation) of the composition. However, when the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention but has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980).

For Applicants' argument (Remarks, page 10, last paragraph to page 11, 2nd paragraph), Examiners disagrees because Mine does teach the filler can be pre-coated with hexamethyldisilazane, *supra*. Therefore, *In re Fitzgerald* is still applicable.

6. Claims 15, 17, 49 and 51 are rejected under 35 USC 103(a) as being unpatentable over Mine in view of Matayabas.

Mine discloses a thermal interface composition, *supra*, which is incorporated herein by reference. Mine teaches the employment of heat-conductive fillers containing aluminum nitride in a polyorganosiloxane composition. (col. 6, line 64 to col. 7, line 22) Mine is silent on a boron-based thermally conductive filler. However, Matayabas teaches the equivalence/interchangeability among aluminum nitride and boron nitride as heat-conductive fillers in a polyorganosiloxane composition. (col. 5, line 66 to col. 6, line 12) Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate boron nitride in Mine's composition. Especially, Mine is in the same field as Matayabas' endeavor.

7. Claims 21, 24, 55 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mine.

Mine discloses a thermal interface composition, *supra*, which is incorporated herein by reference. Mine is silent on the use of a rheological modifier such as a solvent. However, a rheological modifier can affect the properties of the composition such as processibility, shear modulus, etc. Therefore, it would have been obvious to one of ordinary skilled in the art at the time of the invention was made to incorporate a rheological modifier in the composition in order to afford a thermal interface composition with desired properties.

8. Claims 1-15, 17-26, 35-49 and 51-60 are rejected under 35 U.S.C. 103(a) as obvious over Theodore (US 4 292 225) in view of Fujiki (US 5 013 772).

Theodore discloses a composition comprising a vinyl or allyl group-containing polydiorganosiloxane, a Si-H containing polydiorganosiloxane and fillers such as fumed silica, zinc oxide, boron nitride, etc. These fillers are thermally conductive. A platinum catalyst can be used. An inhibitor such as silicone oligomer containing alkenyl groups, quinoline, etc. can be used. (col. 2, line 62 to col. 5, line 15 and Examples) Since the vinyl or allyl group-containing polydiorganosiloxane and the SiH-containing polydiorganosiloxane have different substituents, Examiner has a

reasonable basis to believe that each has a different solubility parameter. A viscosity modifier (rheological modifier) can be used, which can be non-reactive (i.e., solvent). (col. 2, lines 36-58) The preambles “thermal interface composition” and “coating composition” are merely intended use, and do not carry any weight of patentability. Theodore is silent on the use of hexamethyldisilazane-treated fillers. However, Fujiki teaches that in a hydrosilylation-curable polyorganosiloxane, fillers such as fumed silica, etc. can be pre-treated with **hexamethyldisilazane**. The motivation is to afford hydrophobicized fillers to impart reinforcement to the composition. (col. 2, lines 12-35, col. 3, line 38 to col. 4, line 6, col. 5, lines 9-26 and col. 6, 29-41) Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the hexamethyldisilazane-treated fillers to Theodore’s composition with expected success. Theodore does not explicitly mention the **morphology** (i.e., phase separation) of the composition. Since the prior art’s composition is now the same as the claimed one. Examiner has reasonable basis to believe that they possess the same properties, including the morphology.

For Applicants’ argument (Remarks, page 10, last paragraph to page 11, 2nd paragraph), Examiner disagrees. The result of pre-treating the filler with hexamethyldisilazane is not a reduce-to-practice issue. Notably, the process of pre-

treating the filler with hexamethyldisilazane was actually reduced to practice as set forth in Applicants' specification, however, the foregoing result is merely an alleged outcome resulting from a process that was reduced to practice, i.e., pre-treating the filler with hexamethyldisilazane. Therefore, Examiner does/did not question whether Applicants' disclosure regarding the filler treatment fulfills the 35 USC 112, first paragraph or not. Now, the question is that whether the foregoing result is expected or unexpected to one of ordinary skill in the art at the time the invention was made. If the result is the former, then, a *prima facie* case of obviousness exists, and the rejections set forth above are deemed to be adequate. On the other hand, if Applicants assert that the result is unexpected to one of ordinary skill in the art at the time the invention was made, then, Examiner believes that the burden is now on Applicants to demonstrate the alleged unexpected result in a proper declaration with **sufficient** evidence.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang Peng whose telephone number is (571) 272-1091. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Seidleck, can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained

from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

klp
January 21, 2009

/Kuo-Liang Peng/
Primary Examiner, Art Unit 1796